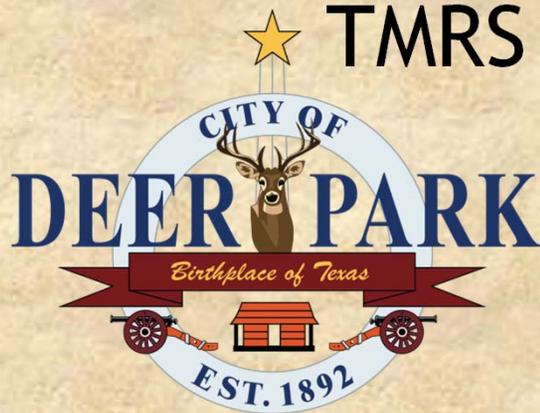




# CITY OF DEER PARK

★ TMRS (Pension Plan) Prefunding



# City's Current State w/TMRS

- Funded ratio currently 90.1%
- As it stands currently, will take 30 years to pay off the Unfunded Actuarial Accrued Liability (UAAL)
- Would like to explore option of 'Prefunding' which would:
  - Reduce UAAL liability
  - Reduce UAAL timeframe to pay off
  - Save the city money in the long term
  - And more..

# TMRS Staff Bios

- **Leslee Hardy** – TMRS Director of Actuarial Services

Leslee joined TMRS in December 2007 as the System's first Staff Actuary. As the Director of Actuarial Services, she coordinates actuarial activities between the Board, staff, member cities, and the System's consulting actuary, GRS. She is a Fellow of the Conference of Consulting Actuaries, an Associate of the Society of Actuaries, an Enrolled Actuary, and a Member of the American Academy of Actuaries.

- **Anthony Mills** – TMRS Senior Regional Manager - City Services

Anthony has more than 20 years of public retirement program experience and currently serves as senior manager of TMRS' Regions 3 and 4 (covering all of East Texas, portions of Central Texas, and parts of the DFW Metroplex). Before coming to TMRS in 2004, Anthony served as a benefits educator with the Employees Retirement System of Texas (ERS) and the Texas County and District Retirement (TCDRS).

# Pre-Funding TMRS Benefits

City of Deer Park

Prepared by Texas Municipal Retirement System

Presented by Leslee Hardy, ASA,FCA,EA,MAAA

May 8, 2018

# Pre-Funding TMRS Benefits with Additional Contributions Will:

Directly reduce any Unfunded Actuarial Accrued Liability (UAAL) dollar for dollar,

Reduce the years needed to attain a 100% funded status (i.e., to pay off the UAAL),

Produce Cost Savings over the long run,

Provide Deer Park with a stable contribution rate from year to year for budgeting purposes (assuming a flat rate is adopted by City Council),

Provide a contribution rate cushion for future adverse plan experience, and

In most cases, reduce the required contribution rate for future years.

# Options for Pre-Funding TMRS Benefits

Some cities have adopted the regular practice of making additional lump sum contributions at the end of the year, using unexpended municipal funds from the ending year budget (8 in 2017).

Other cities have adopted a practice of maintaining a contribution level from year to year, even when the required contribution rate goes down (67 in 2017).

Other cities may do a combination of the two (1 in 2017).

# Assumptions and Data Used for the Following UAAL Projections

The following is based on the 12/31/2016 Valuation and the respective 2018 Retirement Contribution Rate calculated therein.

This assumes a perfect actuarial world where all actuarial assumptions are exactly met each year.

This also assumes aggregate payroll will increase 3% per year.

As the minimum retirement rate of 14.44% has been paid in the first quarter of this year and any change would need to be approved as part of the budget process, it is assumed that the increase in contribution rates will begin in 2019.

# Current Full Rate = 14.44%

## Deer Park - UAAL Amortization as of 12/31/2016

Normal Cost = 10.41%; Prior Service Cost = 4.03%

Description	2013 Valuation/ 2014 Experience	2015 Actuarial Changes/Experi ence	2016 Experience	2016 Total UAAL	
Years Left	24	29	25		
UAAL Balance	10,755,550	1,107,415	396,607	12,259,572	
					<u>Total Prior</u>
					<u>Service</u>
<u>Payment</u>					<u>Balance</u>
<u>Stream</u>					<u>(BOY)</u>
1	677,494	62,256	24,353	<b>764,103</b>	12,259,572
2	697,819	64,124	25,084	<b>787,026</b>	12,297,482
3	718,753	66,047	25,836	<b>810,637</b>	12,314,263
4	740,316	68,029	26,611	<b>834,956</b>	12,307,778
5	762,525	70,070	27,410	<b>860,005</b>	12,275,724
6	785,401	72,172	28,232	<b>885,805</b>	12,215,622
7	808,963	74,337	29,079	<b>912,379</b>	12,124,801
8	833,232	76,567	29,951	<b>939,750</b>	12,000,388
9	858,229	78,864	30,850	<b>967,943</b>	11,839,293
10	883,976	81,230	31,775	<b>996,981</b>	11,638,190
11	910,495	83,667	32,728	<b>1,026,891</b>	11,393,505
12	937,810	86,177	33,710	<b>1,057,697</b>	11,101,396
13	965,944	88,762	34,722	<b>1,089,428</b>	10,757,734
14	994,923	91,425	35,763	<b>1,122,111</b>	10,358,085
15	1,024,770	94,168	36,836	<b>1,155,774</b>	9,897,686
16	1,055,514	96,993	37,941	<b>1,190,448</b>	9,371,422
17	1,087,179	99,903	39,079	<b>1,226,161</b>	8,773,805
18	1,119,794	102,900	40,252	<b>1,262,946</b>	8,098,944
19	1,153,388	105,987	41,459	<b>1,300,834</b>	7,340,516
20	1,187,990	109,166	42,703	<b>1,339,859</b>	6,491,742
21	1,223,630	112,441	43,984	<b>1,380,055</b>	5,545,347
22	1,260,338	115,814	45,304	<b>1,421,457</b>	4,493,533
23	1,298,149	119,289	46,663	<b>1,464,100</b>	3,327,938
24	1,337,093	122,868	48,063	<b>1,508,023</b>	2,039,598
25	-	126,554	49,505	<b>176,058</b>	618,906
26	-	130,350	-	<b>130,350</b>	478,746
27	-	134,261	-	<b>134,261</b>	376,360
28	-	138,289	-	<b>138,289</b>	263,021
29	-	142,437	-	<b>142,437</b>	137,870
30	-	-	-	-	(15)
<b>Total Payment</b>	<b>23,323,727</b>	<b>2,815,145</b>	<b>887,892</b>	<b>27,026,764</b>	

# Optional Full Rate = 15.44%

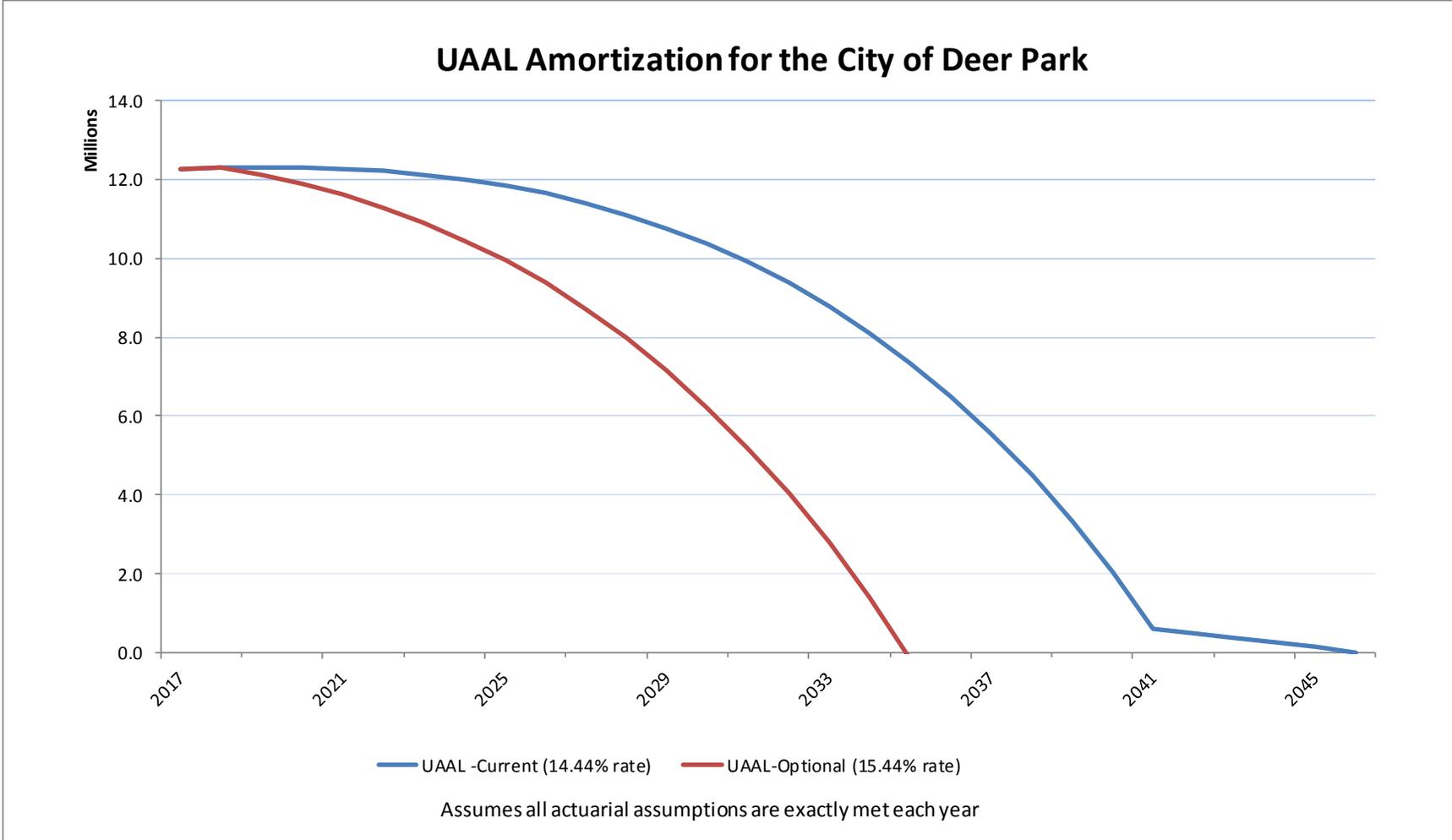
## Deer Park - UAAL Amortization as of 12/31/2016

Normal Cost = 10.41%; Prior Service Cost = 5.03% (2019 & Later)

Description	2013 Valuation/ 2014 Experience	2015 Actuarial Changes/ Experience	2016 Experience	2016 Total UAAL
Years Left	18	18	18	
UAAL Balance	10,755,550	1,107,415	396,607	12,259,572

<u>Payment Stream</u>				<u>Additional Prior Service Payment</u>	<u>Total Prior Service Payment</u>	<u>UAAL Balance (BOY)</u>
1	677,494	62,256	24,353	-	764,103	12,259,572
2	697,819	64,124	25,084	196,445	983,471	12,297,482
3	718,753	66,047	25,836	202,339	1,012,976	12,111,260
4	740,316	68,029	26,611	208,409	1,043,365	11,881,979
5	762,525	70,070	27,410	214,661	1,074,666	11,605,818
6	785,401	72,172	28,232	221,101	1,106,906	11,278,669
7	808,963	74,337	29,079	227,734	1,140,113	10,896,122
8	833,232	76,567	29,951	234,566	1,174,316	10,453,438
9	858,229	78,864	30,850	241,603	1,209,546	9,945,527
10	883,976	81,230	31,775	248,851	1,245,832	9,366,926
11	910,495	83,667	32,728	256,317	1,283,207	8,711,773
12	937,810	86,177	33,710	264,006	1,321,703	7,973,773
13	965,944	88,762	34,722	271,926	1,361,354	7,146,178
14	994,923	91,425	35,763	280,084	1,402,195	6,221,745
15	1,024,770	94,168	36,836	288,487	1,444,261	5,192,709
16	1,055,514	96,993	37,941	297,141	1,487,589	4,050,743
17	1,087,179	99,903	39,079	306,055	1,532,216	2,786,919
18	1,119,794	102,900	40,252	315,237	1,578,183	1,391,671
19						(145,258)
<b>Total Payment</b>	<b>15,863,139</b>	<b>1,457,689</b>	<b>570,212</b>	<b>4,274,962</b>	<b>22,166,002</b>	

# Optional Full Rate = 15.44%



Total Amortization Payments	
Current Schedule	\$ 27,026,764
Optional Schedule	\$ 22,166,002
Difference	\$ 4,860,762

# Optional Full Rate = 16.44%

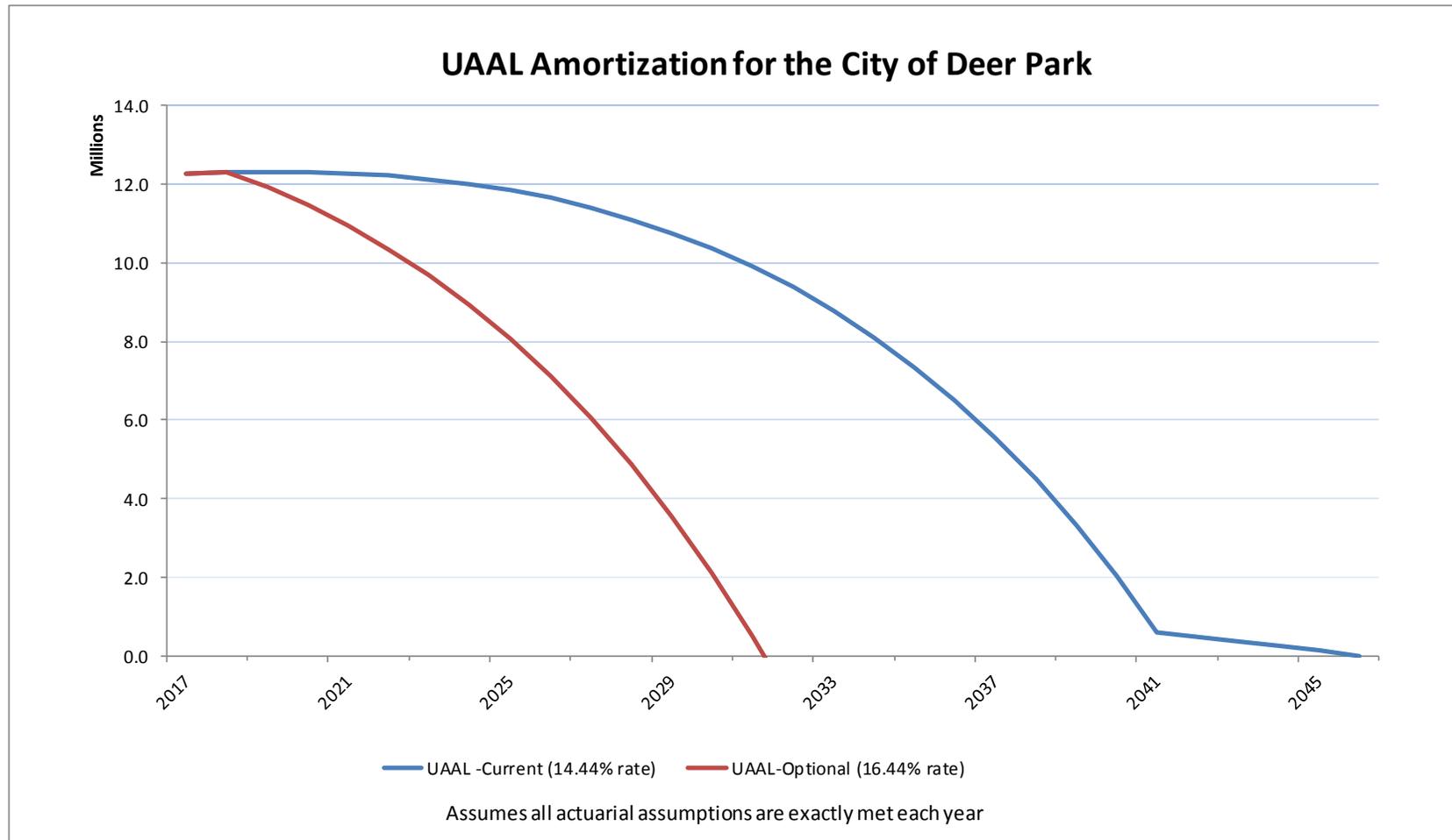
## Deer Park - UAAL Amortization as of 12/31/2016

Normal Cost = 10.41%; Prior Service Cost = 6.03% (2019 & Later)

Description	2013 Valuation/ 2014 Experience	2015 Actuarial Changes/ Experience	2016 Experience	2016 Total UAAL
Years Left	15	15	15	
UAAL Balance	10,755,550	1,107,415	396,607	12,259,572

<u>Payment Stream</u>				<u>Additional Prior Service Payment</u>	<u>Total Prior Service Payment</u>	<u>UAAL Balance (BOY)</u>
1	677,494	62,256	24,353	-	764,103	12,259,572
2	697,819	64,124	25,084	391,966	1,178,993	12,297,482
3	718,753	66,047	25,836	403,725	1,214,362	11,909,212
4	740,316	68,029	26,611	415,837	1,250,793	11,458,183
5	762,525	70,070	27,410	428,312	1,288,317	10,939,062
6	785,401	72,172	28,232	441,162	1,326,966	10,346,125
7	808,963	74,337	29,079	454,397	1,366,775	9,673,224
8	833,232	76,567	29,951	468,028	1,407,779	8,913,765
9	858,229	78,864	30,850	482,069	1,450,012	8,060,670
10	883,976	81,230	31,775	496,531	1,493,512	7,106,348
11	910,495	83,667	32,728	511,427	1,538,318	6,042,656
12	937,810	86,177	33,710	526,770	1,584,467	4,860,865
13	965,944	88,762	34,722	542,573	1,632,001	3,551,612
14	994,923	91,425	35,763	558,850	1,680,961	2,104,864
15	1,024,770	94,168	36,836	575,616	1,731,390	509,866
16						(1,244,907)
<b>Total Payment</b>	<b>12,600,653</b>	<b>1,157,894</b>	<b>452,939</b>	<b>6,697,266</b>	<b>20,908,752</b>	

# Optional Full Rate = 16.44%



Total Amortization Payments	
Current Schedule	\$ 27,026,764
Optional Schedule	\$ 20,908,752
Difference	\$ 6,118,012

# Optional Full Rate = 17.44%

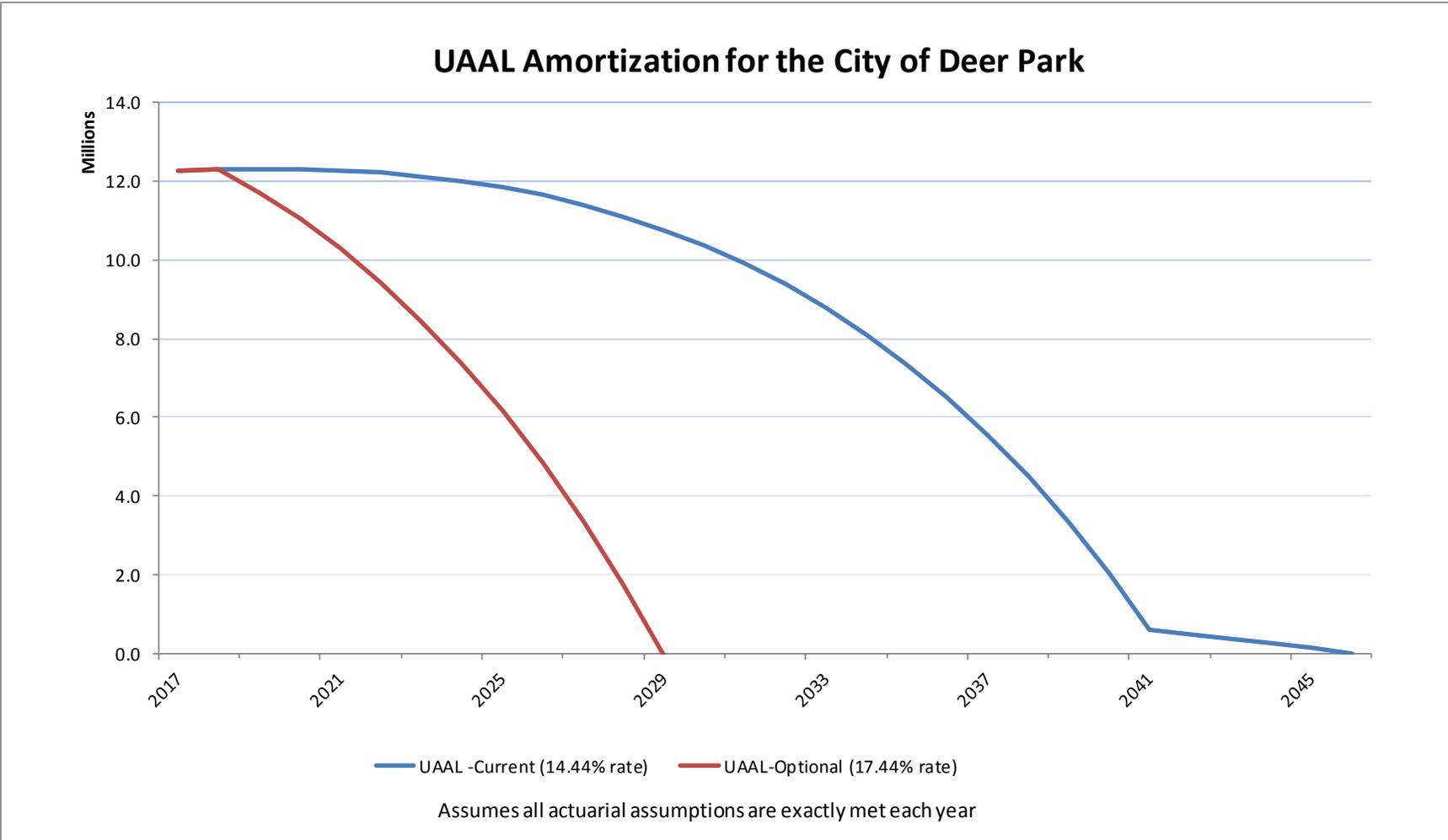
## Deer Park - UAAL Amortization as of 12/31/2016

Normal Cost = 10.41%; Prior Service Cost = 7.03% (2019 & Later)

Description	2013 Valuation/ 2014 Experience	2015 Actuarial Changes/Expe rience	2016 Experience	2016 Total UAAL
Years Left	12	12	12	
UAAL Balance	10,755,550	1,107,415	396,607	12,259,572

<u>Payment Stream</u>				<u>Additional Prior Service Payment</u>	<u>Total Prior Service Payment</u>	<u>UAAL Balance (BOY)</u>
1	677,494	62,256	24,353	-	764,103	12,259,572
2	697,819	64,124	25,084	587,488	1,374,514	12,297,482
3	718,753	66,047	25,836	605,112	1,415,749	11,707,164
4	740,316	68,029	26,611	623,266	1,458,222	11,034,387
5	762,525	70,070	27,410	641,964	1,501,968	10,272,307
6	785,401	72,172	28,232	661,222	1,547,027	9,413,580
7	808,963	74,337	29,079	681,059	1,593,438	8,450,326
8	833,232	76,567	29,951	701,491	1,641,241	7,374,092
9	858,229	78,864	30,850	722,536	1,690,478	6,175,813
10	883,976	81,230	31,775	744,212	1,741,193	4,845,769
11	910,495	83,667	32,728	766,538	1,793,429	3,373,540
12	937,810	86,177	33,710	789,534	1,847,231	1,747,956
13						(42,954)
<b>Total Payment</b>	<b>9,615,015</b>	<b>883,539</b>	<b>345,618</b>	<b>7,524,421</b>	<b>18,368,594</b>	

# Optional Full Rate = 17.44%



Total Amortization Payments		
Current Schedule	\$	27,026,764
Optional Schedule	\$	18,368,594
Difference	\$	8,658,170

# Summary of Potential Savings

Retirement Contribution Rate	2018 Current (14.44%)	15.44%	16.44%	17.44%
Years to Amortize UAAL	29	18	15	12
Cost Savings	\$0	\$4.9M	\$6.1M	\$8.7M